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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,040	07/18/2003	Nobuo Sugitani	13425.32US01	6453
23552	7590	02/23/2004	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			ARTHUR JEANGLAUDE, GERTRUDE	
			ART UNIT	PAPER NUMBER
			3661	
DATE MAILED: 02/23/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

SK

Office Action Summary	Application No.	Applicant(s)	
	10/623,040	SUGITANI ET AL.	
	Examiner	Art Unit	
	Gertrude Arthur-Jeanglaude	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 4-5 are objected to because of the following informalities: In claims 4-5, it is suggested that Applicant's representative specifically describes the phrase "an apparatus for determining linearity of tire characteristic according to claim 1" to include all the limitations of claim 1. Appropriate correction is required.

Allowable Subject Matter

Claims 1-6 are allowed.

The prior art fails to disclose an apparatus or program for determining linearity of tire characteristic, which causes a computer to execute a process to determine whether tires of a traveling vehicle stand in a linear region or in a non-linear region of the tire characteristic, the process comprising the steps of receiving at least one of an operation amount of an operation unit with which a driver of the traveling vehicle performs a steering operation and an actually steered amount of steerable wheels of the traveling vehicle, which are detected by an operation amount detector and a steered amount detector, respectively; determining a first sign of one of the vehicle behavior deviation and the rate of change of the vehicle behavior deviation, and a second sign of the actual vehicle behavior indicator; if the first and second signs are both positive and the rate of change of the vehicle behavior deviation is greater than a first prescribed value, determining that the tires of the traveling vehicle stand in the non-linear region of the tire

characteristic; and if the first and second signs are both negative and the rate of change of the vehicle behavior deviation is less than a second prescribed value, determining that the tires of the traveling vehicle stand in the non-linear region of the tire characteristic.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Okawa et al. (U.S. Patent No. 5,591,906) disclose a tire pressure drop detecting device method.

Matsuno (U.S. Patent No. 5,742,917) discloses a driving torque distribution control system for vehicle and the method thereof.

Nakamura et al. (U.S. Patent No. 5,408,411) disclose a system for predicting behavior of automotive vehicle and for controlling vehicular behavior based thereon.

This application is in condition for allowance except for the following formal matters:

As stated above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gertrude Arthur-Jeanglaude whose telephone number is (703) 308-7564. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski can be reached on (703) 308-3873. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GAJ

GAJ
February 11, 2004

Gertrude A. Jeanglaude
GERTRUDE A. JEANGLAUE
PRIMARY EXAMINER